

REMARKS

Applicant respectfully requests reconsideration of the present application.

Claims 1-36 are pending. Claims 1-12, 16-32 and 34-35 have been amended. No new matter has been added.

Applicant reserves all rights with respect to the applicability of the Doctrine of Equivalents.

The Rejection under 35 U.S.C. § 101

The Examiner rejected claims 1-30 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory matter. Without admitting to the propriety of this non-statutory matter rejection, Applicant has amended claims 1-12 and 18-30, and paragraph [0033]. Accordingly, Applicant respectfully submits that the rejection under 35 U.S.C. § 101 has been overcome.

The Rejection under 35 U.S.C. § 102

The Examiner rejected independent claims 1, 7, 10, 16, 19 and 28 under 35 U.S.C. § 102(b) based on U.S. Patent Publication No. 2002/0138542 of Bollella et al. ("Bollella"). Applicant respectfully disagrees.

Claim 1 relates to *thread* scheduling, but Bollella relates to *task* scheduling. Task scheduling is not equivalent to thread scheduling because a united task may be executed by different threads.

Even assuming to the contrary, Bollella does not disclose or suggest the thread scheduling of claim 1. A performance metric indicates a method to measure a quality of a thread (software) with a quantitative value. A thread performance graph 300, in Figure 3 of Applicant's Specification, shows an example of *performance metric data points*, each of which has a performance value (decode time) with respect to a scheduling quantum value. Among those multiple points, a best performance point 306 is selected, and its corresponding scheduler quantum is determined as a new scheduling quantum value. (Figure 3 and par. [0023] of Applicant's Specification) Accordingly, the thread scheduling of claim 1 is performed by "*sampling a plurality of performance metric data points for each thread...*" and "*calculating a new scheduling quantum value by processing the performance metric data points according to the performance objective*" as recited in claim 1.

Bollella fails to disclose or suggest such operations of claim 1. Bollella focuses on periodic tasks, *i.e.*, routine tasks. A routine task is defined with a period, *i.e.*, the frequency of task execution, and a cost, *i.e.*, the maximum time to complete the task in a single period. (par. [0004] of Bollella) To increase the likelihood that a task will run to completion even when a non-schedulable entity (NSE) unexpectedly takes the task's

execution time, Bollella suggests adding an additional amount of time (“cost extension”) to the associated cost for each task, which can be expanded as long as all other tasks will complete on time. (pars. [0038] & [0040])

In claim 1, for *each* thread, *multiple* performance metric data points are sampled to calculate a new scheduling quantum value. By contrast, in Bollella, each routine task is associated with one *single* period and one *single* cost. To determine a cost extension of a task in Bollella, the single cost of *every* task divided by its single period is summed and compared a certain value. (pars. [0042] & [0043])

No part of Bollella discloses or suggests “sampling a *plurality* of performance metric data points for *each* thread ...,” and “calculating a new scheduling quantum value by processing the plurality of performance metric data points according to the performance objective” as recited in claim 1. Thus, Applicant respectfully submits that the rejection under 35 U.S.C. § 102 based on Bollella with respect to claim 1 has been overcome.

Claims 7, 10, 16, 19 and 28 contain similar, but not identical, limitations compared to the limitations of claim 1. Therefore, at least for the reason stated above, Applicant respectfully submits that the rejection of claims 7, 10, 16, 19 and 28 based on Bollella has been overcome.

Claims 2-6, 8-9, 11-15, 17-18, 20-27 and 29-30 depend, directly or indirectly, from

claims 1, 7, 10, 16, 19 and 28, respectively, and thus, include the limitations set forth in their respective base claims. Therefore, at least for the reason discussed above, Applicant respectfully submits that the rejection of claims 2-6, 8-9, 11-15, 17-18, 20-27 and 29-30 based on Bollella has been overcome.

The Rejection under 35 U.S.C. § 103

The Examiner rejected independent claims 31 and 34 under 35 U.S.C. § 103 based on Bollella in view of the well-known prior art. Applicant respectfully disagrees.

Bollella does not disclose or suggest, among other things, the processor of claim 31, which “sample[s] *a plurality of performance metric data points for each thread*” and “process[es] the plurality of performance metric data points according to the performance objective *to calculate a new scheduling quantum value,*” as discussed above regarding claim 1.

The well-known prior art alleged by the Examiner, *i.e.*, a battery or fuel cell to power a portable media device, cannot fill the gap in Bollella. Therefore, Applicant respectfully submits that the rejection of claim 31 in view of Bollella and the alleged prior art has been overcome.

Claim 34 contains similar, but not identical, limitations compared to the limitations of claim 31. Therefore, at least for the reason stated above, Applicant

respectfully submits that the rejection of claim 34 in view of Bollella and the alleged prior art has been overcome.

Claims 32-33 and 35-36 depend, directly or indirectly, from claims 31 and 34, respectively, and thus, include the limitations set forth in their respective base claims. Thus, at least for the reason discussed above, Applicant respectfully submits that the rejection of claims 32-33 and 35-36 in view of Bollella and the alleged prior art has been overcome.

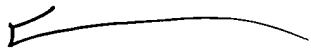
Applicant, therefore, respectfully submits that the applicable rejections have been overcome and the pending claims are in condition for allowance.

Please charge any shortages and credit any overages to Deposit Account No. 02-2666. Any necessary extension of time for response not already requested is hereby requested. Please charge any corresponding fee to Deposit Account No. 02-2666.

Respectfully submitted,

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Dated: April 8, 2008



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